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REMARKS

Claims 1, 3 to 20, 22 to 25, 27 to 32 and 34 to 41 are pending in this application of which

claims 1, 10, 18, 25 and 32 are the independent claims. Favorable reconsideration and further

examination are respectfully requested.

Applicants' undersigned representative held a teleconference with the Examiner and the

Examiner's supervisor on November 12, 2008. No agreement was reached with the Applicants.

The Examiner' supervisor indicated that he would review Applicants' arguments and call

Applicants' undersigned representative.

Claims 1, 4 to 6, 8 to 20, 23 to 25 and 28 to 32 and 36 to 41 were rejected under 35

U.S.C. § 103(a) as being obvious over Ohta et al. (U.S. Patent Application Publication Number

2002/0083317 hereinafter "Ohta") in view of Tardo et al. (U.S. Patent Number 7,082,534).

Claim 1 is directed to a processor. The processor includes a crypto unit including a

cipher core configured to cipher data received, authentication cores configured to authenticate

the ciphered data and processing contexts each configured to process at least one data packet at a

time and to store cipher keys and algorithm context associated processing the at least one data

packet. At least two authentication cores each implements a different authentication algorithm.

The processor also includes an authentication buffer configured to store the ciphered data and

provide the ciphered data to the authentication cores each in an amount based on the

corresponding authentication algorithm implemented. Each processing context includes

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authentication of the at least one packet. The authentication buffer includes buffer elements. Each buffer element corresponds to a respective one of the plurality of processing contexts and a number of the plurality of processing contexts does not equal a number of the authentication cores.

The applied art is not understood to disclose or to suggest the foregoing features of claim 1. In particular, the cited references do not disclose or suggest that each processing context includes authentication of at least one packet, that each buffer element corresponds to a respective one of the plurality of processing contexts and that a number of the plurality of processing contexts does not equal a number of the authentication cores.

Applicants respectfully submit that the Examiner has failed to put forth a rational and consistently logical argument that supports his assertion that one of ordinary skill in the art would find the claimed invention taught in the Ohto and Tardo references. This inconsistency is primarily based in the Examiner's failure to show in Ohto his interpretation of the claimed processing contexts that is consistent with the rest of the claimed invention. The Examiner states that "processing contexts are comprised of a combination of authentication processing and/or encryption processes" (emphasis added, see page 5 of the Office Action). As understood by Applicants, the Examiner is indicating a processing context may include (1) ciphering or (2) authentication or (3) both ciphering and authentication or (4) neither as shown in FIG. 3 of Ohta. This rationale is incorrect with respect to Applicants' invention because, in Applicants' claimed invention, each processing context includes authentication. Thus, by the Examiner's own

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admission, Ohta does not teach that "each processing context includes authentication of at least one packet."

Specifically, for a portion of the claimed invention that recites "a number of the plurality of processing contexts does not equal a number of the authentication cores" the Examiner states:

> "processing contexts are comprised of a combination of authentication processing and/or encryption processes with associated buffers as shown in Ohta paragraph [0042]. Therefore the system assigns a processing context for a packet which may or may not require authentication" (emphasis added, see page 5 of the Office Action).

Since the claimed invention recites that "each processing context comprising authentication of the at least one packet" (emphasis added), the Examiner's assertion that a processing context may or may not require authentication is clear error. Therefore, Ohta does not teach that a number of the plurality of processing contexts does not equal a number of the authentication cores.

Moreover, for a portion of the claimed invention that recites "each buffer element corresponding to a respective one of the plurality of processing contexts," the Examiner states that "Figure 12 shows two buffer and two authentication processing units" (see page 5 of the Office Action). The Examiner's statement is not logical since the claimed invention recites "a number of the plurality of processing contexts does not equal a number of the authentication cores" and the Examiner is equating authentication processing units to processing contexts in his statement. Therefore, the Examiner has not shown that Ohta teaches each buffer element corresponding to a respective one of the plurality of processing contexts.

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With respect to the Tardo reference, the Examiner indicates that since Tardo teaches several authentication cores, each corresponding to a different authentication protocol, that Tardo also teaches that the number of authentication cores may not be equal to the number of processing contexts. Applicants respectfully submit that the Examiner's statement with respect to Tardo is a conclusory statement which is not supported by a specific citation in Tardo nor does it indicate how one of ordinary skill in the art at the time of the invention would have combined Tardo with Ohta in the manner suggested by the Examiner.

Accordingly, for at least the reasons indicated above, even if Tardo were combined with Ohta, the resulting hypothetical combination would not disclose or suggest that each processing context includes authentication of at least one packet, that each buffer element corresponds to a respective one of the plurality of processing contexts and that a number of the plurality of processing contexts does not equal a number of the authentication cores. For at least this reason, Applicants request withdrawal of the cited references.

Independent claims 10, 18, 20, 25 and 32 include the feature that each processing context includes authentication of at least one packet, that each buffer element corresponds to a respective one of the plurality of processing contexts and that a number of the plurality of processing contexts does not equal a number of the authentication cores as recited in claim 1. Applicants submit that the Ohta and the Tardo references should also be withdrawn with respect to claims 10, 18, 25 and 32 for at least the same reasons as claim 1.

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Applicants further note that with respect to claims 18, 20, 25 and 32 that the cited prior art does not teach the limitation of an <u>integrated circuit chip</u> nor has the Examiner addressed this limitation.

Furthermore, with respect to claims 36 to 38, the cited art does not teach that the number of the plurality of processing contexts does not equal a number of the plurality of cipher cores. The Examiner indicates that with respect to claims 36, 38 and 40 that his rationale is the same as in claim 1 for authentication cores being unequal to processing contexts. As previously indicated, the Examiner's rationale is illogical with respect to the authentication cores being unequal to processing contexts. Also, the Examiner needs to specifically show for the record how Ohta teaches that the number of the plurality of processing contexts does not equal a number of the plurality of cipher cores since authentication cores are not the same as cipher cores.

Moreover, with respect to claims, 37, 39 and 41 the Examiner states that it would have been obvious to one of ordinary skill in the art that the number of the plurality of processing contexts is six, a number of the buffer elements is six, the number of the plurality of cipher cores is four and the number of the authentication cores is five. Applicants respectfully disagree. The Examiner has never shown how many processing contexts Ohta teaches much less that the number of processing contexts is different or even greater than the number of cipher cores and authentication cores. In addition, the Examiners' assertion that Applicants' choice of quantities is merely an example is irrelevant statement and is not a basis for a proper rejection.

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For at least the foregoing reasons, Applicants request withdrawal of the art rejections.

Applicants submit that all dependent claims now depend on allowable independent claims.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for withdrawing the prior art cited with regards to any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicants submit that the entire application is now in condition for allowance. Such action is respectfully requested at the Examiner's earliest convenience.

All correspondence should be directed to the address below. Applicants' attorney can be reached by telephone at (781) 401-9988 ext. 123.
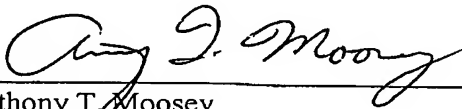
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Enclosed is a Petition for a One-Month Extension of Time and Fee. No other fee is

believed to be due for this Response; however, if any other fees are due, please apply such fees

to Deposit Account No. 50-0845 referencing Attorney Docket: INTEL-013PUS.

Respectfully submitted,

Date:____S JANUARY 2009____

_____
Anthony T. Moosey
Reg. No. 55,773

Attorneys for Intel Corporation
Daly, Crowley, Mofford & Durkee, LLP
354A Turnpike Street - Suite 301A
Canton, MA 02021-2714
Telephone: (781) 401-9988 ext. 123
Facsimile: (781) 401-9966